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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/765,708	01/27/2004	Deborah A. Klinkert	20067.0021US01	2573
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HAMRE, SCHUMANN, MUELLER & LARSON, P.C. P.O. BOX 2902 MINNEAPOLIS, MN 55402-0902			EXAMINER EDWARDS, LOREN C	
			ART UNIT	PAPER NUMBER
			3748	

DATE MAILED: 12/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/765,708

Applicant(s)

KLINKERT ET AL.

Examiner

Loren C. Edwards

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 15 November 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 June 2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. An Applicant's Amendment filed on 11/15/06 has been entered. Claim 16 has been canceled; claims 1, 6, and 11 have been amended. Overall, claims 1-15 are pending in the application.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) The invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) The invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1, 3, and 4 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Jörg Alexnat et al. (U.S. Pat. No. 6,058,702). Jörg Alexnat discloses a system comprising: a combustion engine having an exhaust to emit water and exhaust gases from the exhaust (Fig. 1, No. 6 and 13); and a sound-dampening device coupled between the exhaust and a muffler, the sound-dampening device including a tubular member having two or more rings (Fig. 1, No. 19; Fig. 3, No. 57-58; Col. 7, Lines 20-23), located on the inner diameter of the tubular member; each ring having an inner surface exposed directly to an inner space of the tubular member, wherein the rings are positioned and adapted to create water droplets as the exhaust gases and the water

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exit the combustion engine. The functional language of "the rings are positioned and adapted to create water droplets" is not limiting in that any gas containing a vapor would condense when subject to a cooling surface such as the rings of Jörg Alexnat. When functional language is used to define structure, the prior art must disclose the function or be capable of performing the function. The rings of Jörg Alexnat are inherently capable of creating water droplets as the vapor-containing exhaust gas flows over them. The outer casing (Fig. 3, No. 19) is being interpreted as the tubular member. The sound absorbing materials (Fig. 3, Nos. 57 and 58) are ring shaped and therefore being interpreted as the rings. These rings are located on the inner diameter of the tubular member and have a surface exposed directly to an inner space of the tubular member. The examiner points out that any space inside of the tubular member (Fig. 3, No. 19) is an inner space of the tubular member, and that any object inside of this space must be exposed to this space.

4. With regards to claim 3, Jörg Alexnat discloses the system of claim 1, as described above, and further wherein the tubular member includes a flexible exhaust hose for connecting between the exhaust and a muffler (Fig. 1, No. 16 and 18; Col. 5, Lines 3-12), the flexible exhaust hose having an inner diameter (Fig. 2, No. 33), and the two or more rings are located on the inner diameter of the flexible exhaust hose (Fig. 2, No. 38; Col. 5, Lines 55-58), each ring having an outer diameter the same as the inner diameter of the flexible exhaust hose and an inner diameter smaller than the inner diameter of the flexible exhaust hose (Fig. 2, No. 38).

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5. With regards to claim 4, Jörg Alexnat discloses the system of claim 1, as described above, and further wherein the tubular member includes an exhaust tube having a first end connectable to the exhaust (Fig. 1, No. 13 and 15), the tube including an inner diameter (Fig. 2, No. 33), the inner diameter having the at least two rings mounted thereto (Fig. 2, No. 38; Col. 5, Lines 55-58), each ring having an outer diameter the same as the inner diameter of the tube and an inner diameter smaller than the inner diameter of the pipe (Fig. 2, No. 38).

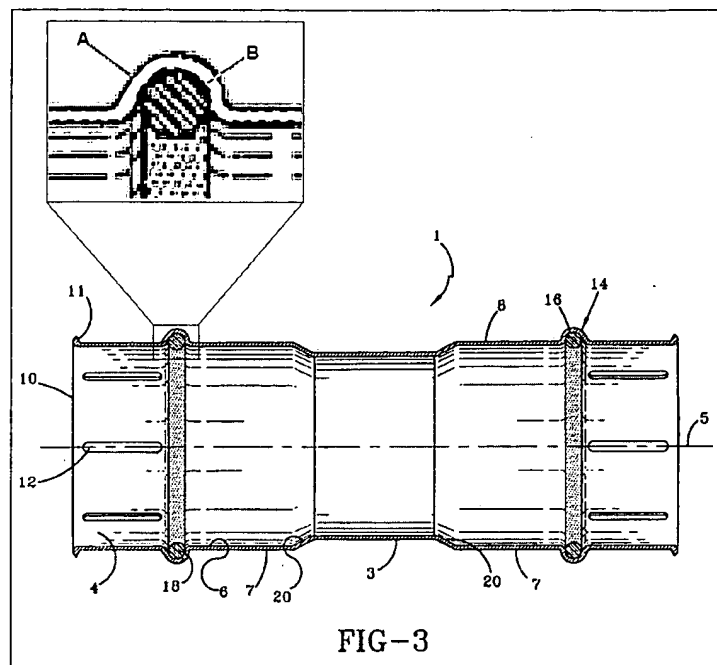
6. Claims 6 and 8 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Davey (U.S. Pat. No. 5,639,127). Davey discloses a flexible exhaust hose for connecting between a combustion engine and a muffler (Abstract), the flexible exhaust hose having an inner diameter, and two or more rings located on the inner diameter of the flexible exhaust hose (Fig. 1, No. 25-26), each ring having an outer diameter the same as the inner diameter of the flexible exhaust hose and an inner surface having an inner diameter smaller than the inner diameter of the flexible exhaust hose (Fig. 1), each of the inner surfaces of the rings exposed directly to an inner space of the flexible exhaust hose, wherein the rings are positioned and adapted to create water droplets as exhaust gases and water exit the combustion engine. The functional language of "the rings are positioned and adapted to create water droplets" is not limiting in that any gas containing a vapor would condense when subject to a cooling surface such as the rings of Davey. When functional language is used to define structure, the prior art must disclose the function or be capable of performing the function. The rings of Davey are inherently capable of creating water droplets as the vapor-containing exhaust gas flows

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over them. The area inside of the flexible exhaust hose (Fig. 1, No. 25-26) is the inner space of the exhaust hose and any object inside of this space is directly exposed to this space.

7. With regards to claim 8, Davey discloses the apparatus of claim 6, as described above, and further wherein the flexible exhaust hose has an outer diameter of about 2 inches (Col. 7, Lines 47-49).

8. Claims 11-14 are rejected under 35 U.S.C. 102(e) as being clearly anticipated by Bishop et al. (U.S. Pat. No. 6,843,516). Bishop discloses a rigid tube having a first end connectable to an exhaust outlet of a combustion engine (Fig. 3, No. 11), the tube including a uniform inner diameter (Modified Fig. 3, No. B), the inner diameter having at least two rings mounted thereto (Fig. 3, No. 16 and 18), each ring having an outer diameter the same as the inner diameter of the tube and an inner diameter smaller than the inner diameter of the pipe (Modified Fig. 3, No. B), wherein the rings are adapted to create water droplets as exhaust gases and cooling water exit the combustion engine. The functional language of "the rings are adapted to create water droplets" is not limiting in that any gas containing a vapor would condense when subject to a cooling surface such as the rings of Bishop. When functional language is used to define structure, the prior art must disclose the function or be capable of performing the function. The rings of Bishop are inherently capable of creating water droplets as the vapor-containing exhaust gas flows over them.



Modified Fig. 3

9. With regards to claim 12, Bishop discloses the apparatus of claim 11, as described above, and further wherein the tube is a rigid metal pipe (Fig. 3, No. 3; Abstract).

10. With regards to claim 13, Bishop discloses the apparatus of claim 11, as described above, and further wherein a second end of the tube is connectable to a flexible marine exhaust hose.

11. With regards to claim 14, Bishop discloses the apparatus of claim 11, as described above, and further wherein the tube includes a first ring mounted to the first end of the tube and a second ring mounted to a second end of the pipe (Fig. 3, No. 18 and 16).

Claim Rejections - 35 USC § 103

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12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. Claim 2 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jörg Alexnat in view of Woon et al. (U.S. Pat. No. 6,408,625). Jörg Alexnat discloses the system of claim 1, but fails to specifically discuss the engine being within a "genset". Woon discloses operating techniques for internal combustion engines that teach the use of an internal combustion engines in a generator set "genset" (Col. 17, Lines 9-22). It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the "genset" as taught by Woon in the system of Jörg Alexnat for the advantage of providing generated electricity to the vehicle.

15. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Jörg Alexnat in view of Smullin et al. (U.S. Pat. No. 6,591,939). Jörg Alexnat discloses the system of claim 1, but fails to specifically discuss the system being adapted for marine use. Smullin discloses a marine engine silencer system that shows the use of an

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internal combustion engine in a marine application. It would have been obvious to one having ordinary skill in the art at the time the invention was made to utilize the marine application as taught by Smullin with the system of Jörg Alexnat for the advantage of internal combustion powered propulsion and for generated electricity.

16. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davey. Davey discloses the apparatus of claim 6, as described above, but does not expressly disclose the two or more rings being spaced about 4.5 inches apart from each other along a length of the flexible exhaust hose. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to space the two or more rings 4.5 inches apart because Applicant has not disclosed that the spacing provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with such spacing because the rings exist at the ends of the tube and a 4.5 inch tube could be required based on exhaust requirements. Therefore, it would have been an obvious matter of design choice to modify Davey to obtain the invention as specified in claim 7.

17. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Davey in view of Smullin. Davey discloses the apparatus of claim 6, as described above, but fails to specifically discuss the flexible exhaust hose being adapted for marine conditions. Smullin discloses a marine engine silencer system that shows the use of exhaust conduit in a marine application (Fig. 2, No. 135, 139, and 140). It would have been obvious to one having ordinary skill in the art at the time the invention was made to

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utilize the flexible exhaust coupler apparatus as taught by Davey in the system of Smullin for the advantage of coupling sections of exhaust pipe and reducing stresses caused by engine vibration.

18. Claim 10 is rejected under 35 U.S.C. 103 (a) as being unpatentable over Davey. Davey discloses the apparatus of claim 6, as described above, but does not expressly disclose the length of the flexible exhaust hose being about 6 feet or less. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to make the length of the flexible exhaust hose about 6 feet because Applicant has not disclosed that the length of 6 feet provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the art, furthermore, would have expected Applicant's invention to perform equally well with a flexible exhaust hose length of 6 feet because the distance required for exhaust to travel in exhaust applications is often near or 6 feet. Therefore, it would have been an obvious matter of design choice to modify Davey to obtain the invention as specified in claim 10.

19. Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bishop. Bishop discloses the apparatus of claim 11, as described above, but fails to expressly disclose the tube and the rings being made of stainless steel. At the time the invention was made, it would have been an obvious matter of design choice to a person of ordinary skill in the art to make the tube and rings out of stainless steel because Applicant has not disclosed that the stainless steel material provides an advantage, is used for a particular purpose, or solves a stated problem. One of ordinary skill in the

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art, furthermore, would have expected Applicant's invention to perform equally well being made of stainless steel because stainless steel is commonly used in internal combustion engine exhaust applications. Therefore, it would have been an obvious matter of design choice to modify Bishop to obtain the invention as specified in claim 15.

Response to Arguments

20. Applicant's arguments filed 11/15/06 have been fully considered but they are not persuasive. Applicant has argued: 1) That Jorg does not teach an inner surface of each of two or more rings which is exposed directly to an inner space of a tubular member; 2) That Jorg does not teach rings positioned and adapted to create water droplets; 3) That Davey fails to disclose an inner surface of each of two or more rings; 4) That Davey fails to disclose the rings being positioned and adapted to create water droplets as exhaust gases and water exit the combustion engine; 5) That Bishop fails to disclose a tube having a uniform inner diameter;

21. With regards to Applicant's first argument, the examiner respectfully disagrees. The tubular member (Jorg, Fig. 1, No. 19) has an inner space that contains the rings (Jorg, Fig. 3, Nos. 57 and 58). Because the tubular member completely contains those items, the items must be exposed directly to the tubular member's inner space.

22. With regards to Applicant's second argument, the examiner respectfully disagrees. The functional language of "the rings are positioned and adapted to create water droplets" is not limiting in that any gas containing a vapor would condense when subject to a cooling surface such as the rings of Jörg Alexnat. When functional language is used to define structure, the prior art must disclose the function or be

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capable of performing the function. The rings of Jörg Alexnat are inherently capable of creating water droplets as the vapor-containing exhaust gas flows over them.

23. With regards to Applicant's third argument, the examiner respectfully disagrees. The rings of Davey (Fig. 1, Nos. 25 and 26) inherently contain inner surfaces.

24. With regards to Applicant's fourth argument, the examiner respectfully disagrees. The functional language of "the rings are positioned and adapted to create water droplets" is not limiting in that any gas containing a vapor would condense when subject to a cooling surface such as the rings of Davey. When functional language is used to define structure, the prior art must disclose the function or be capable of performing the function. The rings of Davey are inherently capable of creating water droplets as the vapor-containing exhaust gas flows over them.

25. With regards to Applicant's fifth argument, the examiner respectfully disagrees. Figure 2 of Bishop best illustrates the uniform diameter of 18.

Conclusion

26. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

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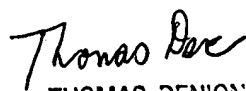
extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Loren C. Edwards whose telephone number is (571) 272-2756. The examiner can normally be reached on M-TH 5:30-4.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Denion can be reached on (571) 272-4859. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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